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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,918	07/10/2001	Michihiko Iida	210815US6	7148

22850 7590 01/30/2004

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EXAMINER

BATTAGLIA, MICHAEL V

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 01/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/900,918

Applicant(s)

IIDA ET AL.

Examiner

Michael V Battaglia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14, 15, 21 and 22 is/are allowed.
- 6) ☐ Claim(s) 1-8, 10-12 and 16-19 is/are rejected.
- 7) ☐ Claim(s) 9, 13 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

4. Claims 9 and 13 are objected to because of the following informalities.
 - a. On lines 6-7 of claim 9, the examiner suggests removing an "is recorded" from "is recorded is recorded".
 - b. On line 2 of claim 13, the examiner suggests replacing "can determine" with - determines-.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 5, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshimaru et al (hereafter Yoshimaru) (US 5,239,533).

In regard to claim 1, Yoshimaru discloses a recording apparatus comprising: recording means (Fig. 2, elements 8-13) for recording identification information of a recording medium in a predetermined area of said loaded recording medium (Col. 3, lines 58-64); and a recording controller for performing control such that said identification information is recorded at a line density differing from that of another piece of information recorded in another area (Col. 3, line 64-Col. 4, line 6).

In regard to claim 3, Yoshimaru discloses that the recording apparatus further comprises a rotation controller for controlling the rotation driving of said recording medium (Fig. 2, element 3), wherein said recording controller is capable of performing recording control of said identification information in a state in which said recording medium is being rotated at a speed differing from the rotational speed in a case where said other information is recorded (Col. 3, lines 53-56).

In regard to claim 5, Yoshimaru discloses a recording apparatus comprising: a recording head (Fig. 2, elements 8-13) for recording information on a disk shaped recording medium which is loaded (Fig. 2, element 1a); a spindle motor for driving said disk-shaped recording medium to rotate (Fig. 2, element 2); and a recording controller for performing control such that the identification information of said recording medium is recorded, in a predetermined area of said

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disk-shaped recording medium, at a line density differing from that of other information which is recorded in another area (Col. 3, line 53-Col. 4, line 6).

In regard to claim 7, Yoshimaru discloses a recording medium, in which identification information having a line density differing from that of information recorded in another area is recorded in a predetermined recording area (Col. 3, line 53-Col. 4, line 6).

6. Claims 1, 4-5, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Torazawa et al (hereafter Torozawa) (US 6,339,571).

In regard to claim 1, Torazawa discloses a recording apparatus comprising: recording means (Fig. 8, elements 34-37) for recording identification information of a recording medium in a predetermined area of said loaded recording medium (Col. 12, lines 6-20); and a recording controller for performing control such that said identification information is recorded at a line density differing from that of another piece of information recorded in another area (Fig. 8, elements 42, 47, and 52 and Col. 12, lines 20-23).

In regard to claim 4, Torazawa discloses that the recording apparatus according to claim 1 further comprises a clock generator for generating a clock in a case where recording is performed on said recording medium (Fig. 8, elements 47 and 52), wherein said recording controller is capable of performing recording control of said identification information in accordance with said clock having a frequency differing from that in a case where said other information is recorded (Col. 11, lines 48-55).

In regard to claim 5, Torazawa discloses a recording apparatus comprising: a recording head (Fig. 8, elements 36-37) for recording information on a disk shaped recording medium which is loaded (Fig. 8, element 1); a spindle motor for driving said disk-shaped recording medium to rotate (Fig. 8, element 38); and a recording controller for performing control such that the

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identification information of said recording medium is recorded, in a predetermined area of said disk-shaped recording medium, at a line density differing from that of other information which is recorded in another area (Fig. 8, elements 42, 47, and 52 and Col. 12, lines 6-23).

In regard to claim 7, Torazawa discloses a recording medium (Fig. 8, element 1), in which identification information having a line density differing from that of information recorded in another area is recorded in a predetermined recording area (Col. 12, lines 6-23).

7. Claims 10, 12, 16-17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshida et al (hereafter Yoshida) (US 5,764,610).

In regard to claim 10, Yoshida discloses a reading apparatus comprising: reading means (Fig. 1, element 2) for reading identification information recorded in a predetermined recording area (Col. 7, lines 35-46) of a loaded recording medium (Fig. 1, element 1); a reading controller for performing reading control corresponding to a line density at which said identification information is recorded when said identification information is read (Fig. 1, element 8; Col. 2, lines 37-43; and Col. 7, lines 36-42); reading determination means for determining whether or not said identification information could be read by predetermined reading control (Fig. 5, element 505); and type determination means for determining the type of said recording medium on the basis of the determination result of said reading determination means (Fig. 5, elements 506 and 510).

In regard to claim 12, Yoshida discloses that the reading apparatus further comprises a rotation controller for controlling the rotational driving of said recording medium (Fig. 1, element 6 and 12-14), wherein said reading controller can perform reading control of said identification information in a state in which said recording medium is being rotated at a speed differing from the rotational speed in a case where another piece of information is read (Col. 7, lines 37-42).

In regard to claim 16, Yoshida discloses a reading apparatus comprising: a reading head for reading information recorded on a loaded recording medium (Fig. 1, element 2); a detector for detecting the recording line density of information recorded in a predetermined recording area of said recording medium in accordance with a reading signal of said head (Fig. 1, element 2); and type determination means for determining, on the basis of the detection result of said detector, the line density of recording medium identification information which is prerecorded in an area provided in an inner radial portion of a lead-in area of said recording medium and for determining the type of said recording medium (Fig. 1, element 8; Fig. 5; and Col. 7, line 35-Col. 8, line 22).

In regard to claim 17, Yoshida discloses a recording medium determination method comprising: an access step for accessing a predetermined recording area of a loaded recording medium (Fig. 5, elements 501-502); a reading control step for performing reading control corresponding to a line density of identification information recorded in said predetermined recording area (Col. 7, lines 37-42); a reading step for reading said identification information in a state in which said reading control is being performed (Fig. 5, element 505); and a type determination step for determining the type of recording medium on the basis of whether or not said identification information could be read (Fig. 5, element 506).

In regard to claim 19, Yoshida discloses that the said reading control step is a step in which said recording medium is rotated at a speed differing from the rotational speed in a case where another piece of information is read (Col. 7, lines 37-42). The examiner notes that the recording medium is rotated at a speed differing from the rotational speed when the predetermined recording area is read when the recording medium is determined to be a CD (Col. 8, lines 23-29).

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Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimaru in view of Kawashima et al (hereafter Kawashima) (US 6,519,217).

In regard to claims 2 and 8, Yoshimaru discloses the recording apparatus of claim 1 and the recording medium of claim 7, wherein said recording medium is a disk-shaped recording medium (Col. 3, line 40), and said predetermined area is formed in an inner radial portion (Col. 3, lines 58-64). Yoshimaru further discloses that the predetermined area is located at the inner radial portion of the recording medium so that the information in the predetermined area is reproduced irrespective of the difference in recording densities (Col. 3, line 66-Col. 4, line 6). Yoshimaru does not disclose that the predetermined area is adjacent to a lead-in area.

Kawashima discloses that a lead-in area is located at the inner radial portion of a recording medium (Col. 8, lines 16-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the predetermined area of Yoshida would be adjacent to a lead-in area, which is also located at an inner radial portion of a recording medium as taught by Kawashima, the motivation being to place the predetermined area in a location that is reproduced irrespective of the difference in recording densities.

In regard to claim 6, Yoshimaru discloses the recording apparatus of claim 5 wherein said predetermined area is formed in an inner radial portion (Col. 3, lines 58-64). Yoshimaru further discloses that the predetermined area is located at the inner radial portion of the recording medium so that the information in the predetermined area is reproduced irrespective of the difference in recording densities (Col. 3, line 66-Col. 4, line 6). Yoshimaru does not disclose that the predetermined area is adjacent to a lead-in area.

Kawashima discloses that a lead-in area is located at the inner radial portion of a recording medium (Col. 8, lines 16-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the predetermined area of Yoshida would be adjacent to a lead-in area, which is also located at an inner radial portion of a recording medium as taught by Kawashima, the motivation being to place the predetermined area in a location that is reproduced irrespective of the difference in recording densities.

9. Claims 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida in view of Kawashima.

In regard to claim 11, Yoshida discloses the reading apparatus of claim 10, wherein said recording medium is a disk-shaped recording medium (Fig. 1, element 1), and said predetermined area is formed in an inner radial portion (Col. 7, lines 36-37). Yoshida does not disclose that the predetermined area is adjacent to a lead-in area.

Kawashima discloses that a lead-in area is located at the inner radial portion of a recording medium (Col. 8, lines 16-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the predetermined area of Yoshida would be adjacent to a lead-in area,

also located at an inner radial portion of the recording medium as taught by Kawashima, the motivation being for the optical pick-up to be located near the lead-in area once the identification information has been read.

In regard to claim 18, Yoshida discloses the recording apparatus of claim 5 wherein said predetermined area is formed in an inner radial portion (Col. 7, lines 36-37). Yoshida does not disclose that the predetermined area is adjacent to a lead-in area.

Kawashima discloses that a lead-in area is located at the inner radial portion of a recording medium (Col. 8, lines 16-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the predetermined area of Yoshida would be adjacent to a lead-in area, also located at an inner radial portion of the recording medium as taught by Kawashima, the motivation being for the optical pick-up to be located near the lead-in area once the identification information has been read.

Citation of Relevant Prior Art

10. Lee discloses that a lead-in area is located at an inner radial portion of a recording medium (Fig. 4, element A) and a method for deciding recording density of a recording medium that records density information in a predetermined location at the inner radial of the recording medium. Hwang et al (US 5,825,726) discloses that table-of-contents information is temporarily stored in a program memory area (PMA) (Col. 2). Murata (US 6,363,040) (Fig. 3) and Kurashina et al (US 6,661,763) (Fig. 1) discloses a PMA located at an inner radial portion of a recording medium followed by a lead-in area. Ashinuma et al (US 5,289,451) discloses reading disc sort identifying information from an inner radial portion. Miyake et al (US 6,034,934) discloses a

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decoding a barcode on a recording medium depending on the period of the barcode information.

Moribe et al (US 5,661,703) discloses a medium identification code ID recorded at an inner radial location of a recording medium (Fig. 9).

Allowable Subject Matter

11. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten to overcome the objection(s) set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. None of the references of record alone or in combination disclose or suggest a disk-shaped recording medium, in which **identification information having a line density differing from that of information recorded in another area is recorded in a predetermined recording area** and in further combination with, from the inner radial portion, a program memory area for temporarily recording and holding the table-of-contents information of user data, a lead-in area where the information recorded in the program memory area is recorded is recorded, and a program area where the user data is recorded are provided; and **said predetermined area is provided between said program memory area and said lead-in area.**

12. Claims 13 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and overcoming any objections to minor informalities in the claims.

In regard to claim 13, none of the references of record alone or in combination disclose or suggest a reading apparatus comprising: reading means for reading identification information recorded in a predetermined recording area of a loaded recording medium; a reading controller

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for performing reading control corresponding to a line density at which said identification information is recorded when said identification information is read; reading determination means for determining whether or not said identification information could be read by predetermined reading control; type determination means for determining the type of said recording medium on the basis of the determination result of said reading determination means; rotation controller for controlling the rotational driving of said recording medium, wherein said reading controller can perform reading control of said identification information in a state in which said recording medium is being rotated at a speed differing from the rotational speed in a case where another piece of information is read; and in further combination with **said type determination means that determines the type of said recording medium on the basis of the number of rotations of said recording medium.**

In regard to claim 20, none of the references of record alone or in combination disclose or suggest a recording medium determination method comprising: an access step for accessing a predetermined recording area of a loaded recording medium; a reading control step for performing reading control corresponding to a line density of identification information recorded in said predetermined recording area; a reading step for reading said identification information in a state in which said reading control is being performed; and a type determination step for determining the type of recording medium on the basis of whether or not said identification information could be read; wherein said reading control step is a step in which said recording medium is rotated at a speed differing from the rotational speed in a case where another piece of information is read; and in further combination with **said type determination step in which the type of said recording medium is determined on the basis of the number of rotations of said recording medium.**

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13. Claims 14-15 and 21-22 are allowable over the prior art of record.

In regard to claim 14, none of the references of record alone or in combination disclose or suggest a reading apparatus comprising: reading means for reading identification information recorded in a predetermined recording area of a loaded recording medium; a signal generator for generating a signal based on the period of information which is read from said recording medium; a detector for detecting the period of a signal generated by said signal generator when said identification information is being read; **density determination means for determining a line density at which said identification information is recorded on the basis of the detection result of said detection means; and type determination means for determining the type of said recording medium on the basis of the determination result of said density determination means.**

In regard to claim 21, none of the references of record alone or in combination disclose or suggest a recording medium determination method comprising: an access step for accessing a predetermined recording area of a loaded recording medium; a reading step for reading identification information recorded in said predetermined area; a detection step for detecting the period of said identification information; **a line density determination step for determining a line density at which said identification information is recorded on the basis of said period; and a type determination step for determining the type of said recording medium on the basis of said line density.**

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V Battaglia whose telephone number is (703) 305-4534. The examiner can normally be reached on 5-4/9 Plan with 1st Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



Michael Battaglia



W. R. YOUNG
PRIMARY EXAMINER